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*Just*

October 7, 1964

HIGH RESOLUTION SCREEN

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The company moved to a new plant in [ ] the end of August. It does not appear that the move disrupted any of the work on this program. The new facilities are excellent, particularly their dark tunnel.

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The final report on the phosphor work by [ ] of [ ] was completed and submitted. This phase of the work was highly successful. The only thing left to complete is the projector and lens.

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Using small 2" x 3" samples, Dick developed a rear projection screen which is transparent to visible light, has no visible particulate structure and has a luminance distribution which is quite close to a true Lambertian surface; i.e., equal brightness over the full range of viewing angles. In addition, screen resolution exceeds 100 lines per millimeter.

Small 2" screen samples were used as specified in the contract in order to concentrate the effort on the crux of the problem; i.e., the evaluation of a variety of coatings in the lab. In exploratory work of this sort it is important to identify the basic problem as was done here, work on that and not burden the investigation with extraneous requirements. The small 2" sample size was well suited to the phosphor coating search. With that success in hand, it is now important to expand the scope of the work to produce larger screens of the three or four phosphors of greatest interest.

Declass Review by NGA.

High Resolution Screen

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[redacted] indicated that the maximum size he can produce in his lab is about 12" x 12" and still achieve good coating quality. [redacted] indicated that if the screens were produced in the [redacted] with lab equipment, the work could probably be done within the funds of the contract and in time for the feasibility demonstration. It would, however, be a change in scope which must be authorized by the customer. It is of great importance that the larger screens be made up in order for the feasibility demonstration to be truly convincing.

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STAT [redacted] says he can authorize the work immediately if the technical monitor approves. Approval is urgent so as not to delay the feasibility demonstration.

Even after a feasibility demonstration which successfully proves the technical concept there is a lot to be done before a piece of working gear will be available for routine operations. The work should be pushed with all dispatch. It is particularly important to plan ahead and overlap the administrative preparation for new work with the final stages of current work so that there will not be long gaps or shutdowns in the technical effort. A good brisk pace and continuity of effort is highly desirable. Some progress has been made in defining the direction of follow-on work. Here again it is important to go to the heart of the problem and not burden the immediate follow-on work with premature requirements. I believe the follow-on work should be:

- A. Long term continuation of the phosphor search and measurement of phosphor characteristics. This can all be done in the lab with small samples.
- B. Fabrication of a large screen, large projector experimental station which can be used to explore the true applicability of the phosphor screen to interpreter work.

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*Why should  
[redacted] build a machine?*

Definition of the final production machine and its operator efficiency and convenience features. At this point, full use should be made of experience gained on other contracts on film drives and controls.

High Resolution Screen

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October 7, 1964

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is preparing a proposal for the follow-on work. He plans to submit it about October 15.

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